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GB 2260490 A   EP 0438986 A1   US 4982748 A
US 4934387 A

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(54) Hair lengthening/thickening

(57) A method of thickening and/or lengthening the appearance of the hair of a subject comprises the steps of forming a plurality of locks 10 of human hair each lock having one end at which the hairs are joined together in a plastics tube 8, selecting a plurality of spatially distributed sites on the scalp of the subject for fixing respective locks, selecting, at each site, a group 18 of hairs growing from the scalp 14 of the subject and connecting the joined end of one of the locks to the group of hairs adjacent to the scalp of the subject by passing the hairs in the group through a plastically deformable tube 22 e.g. of aluminium, introducing the joined end of the lock into the deformable tube, and plastically deforming the tube adjacent to the scalp of the subject to clamp the lock and group of hairs together. Other methods of forming the lock of hair and attaching it to the head are disclosed.

FIG 6

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FIG 1

FIG 2

FIG 3

FIG 4

FIG 5

FIG 6

FIG 7

FIG 8
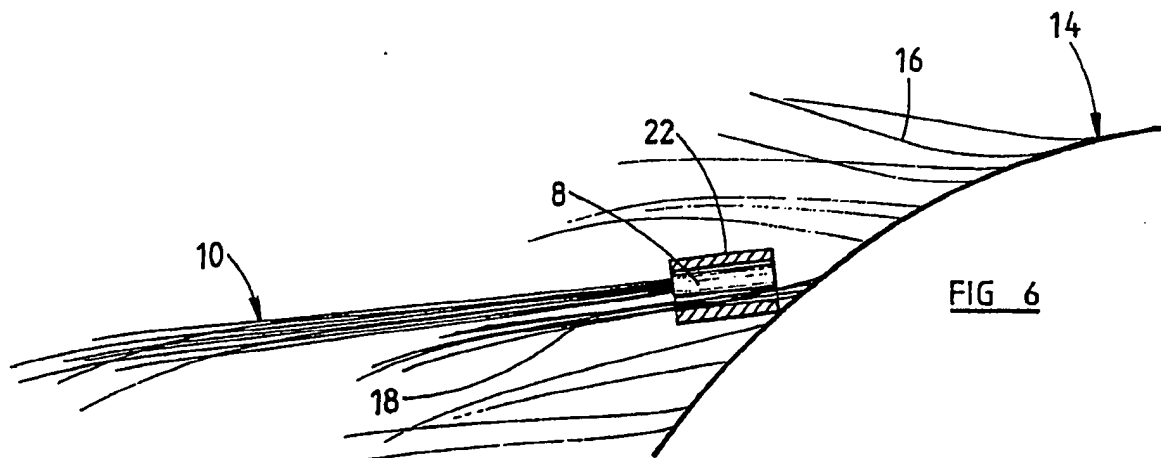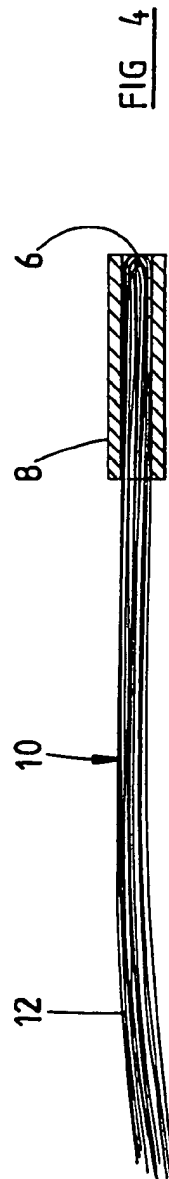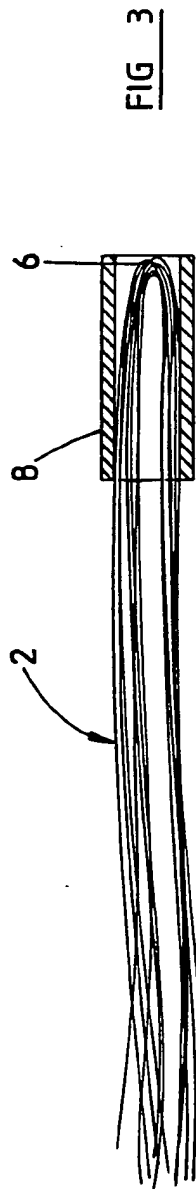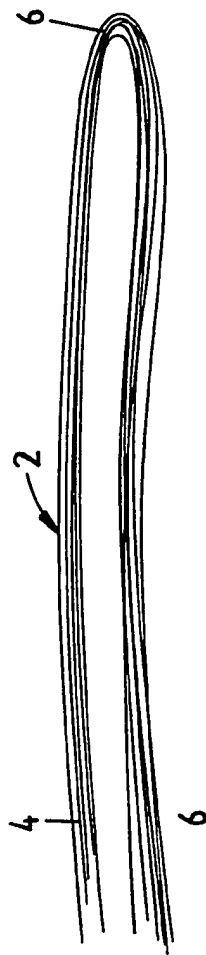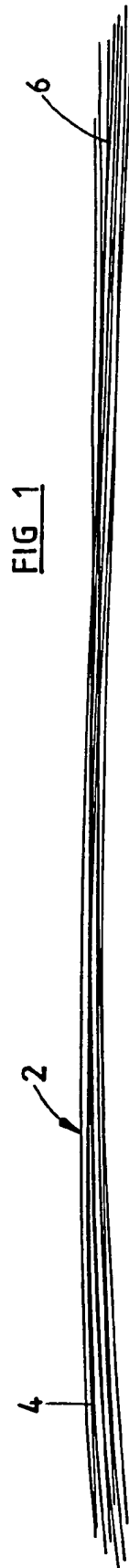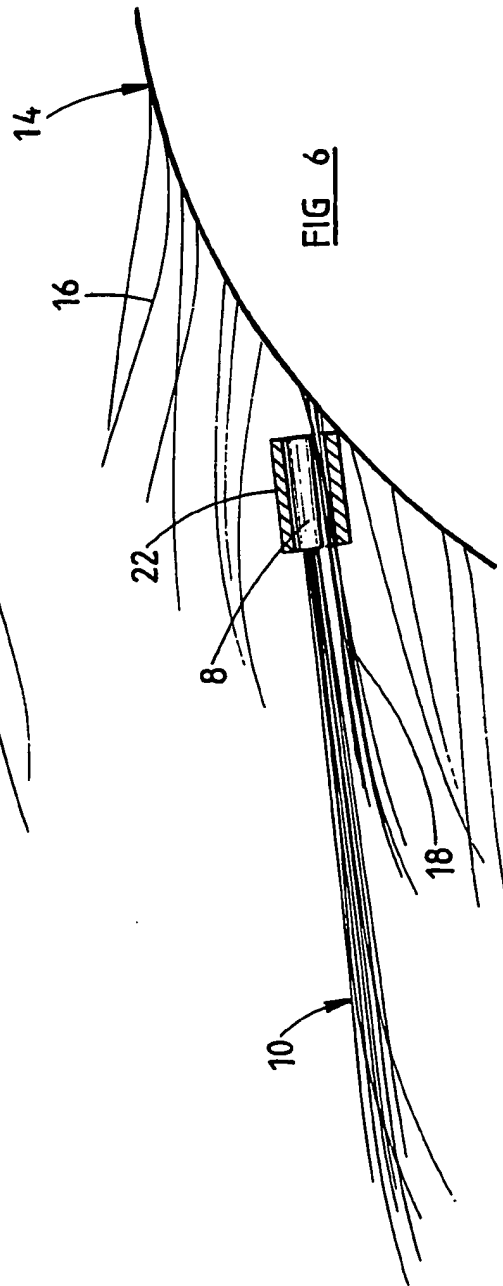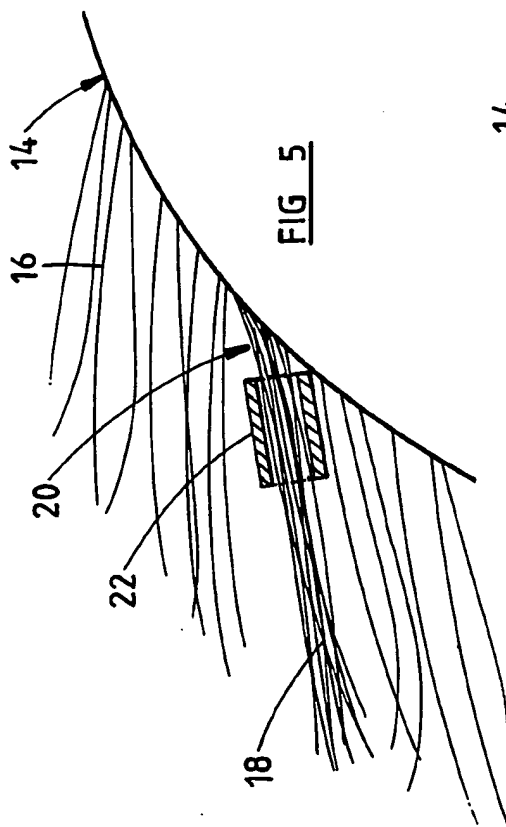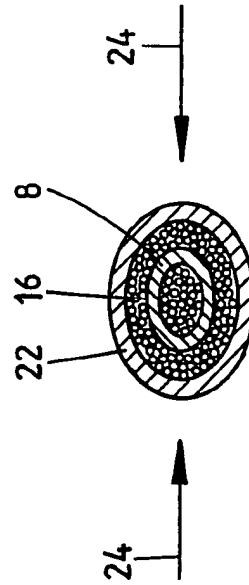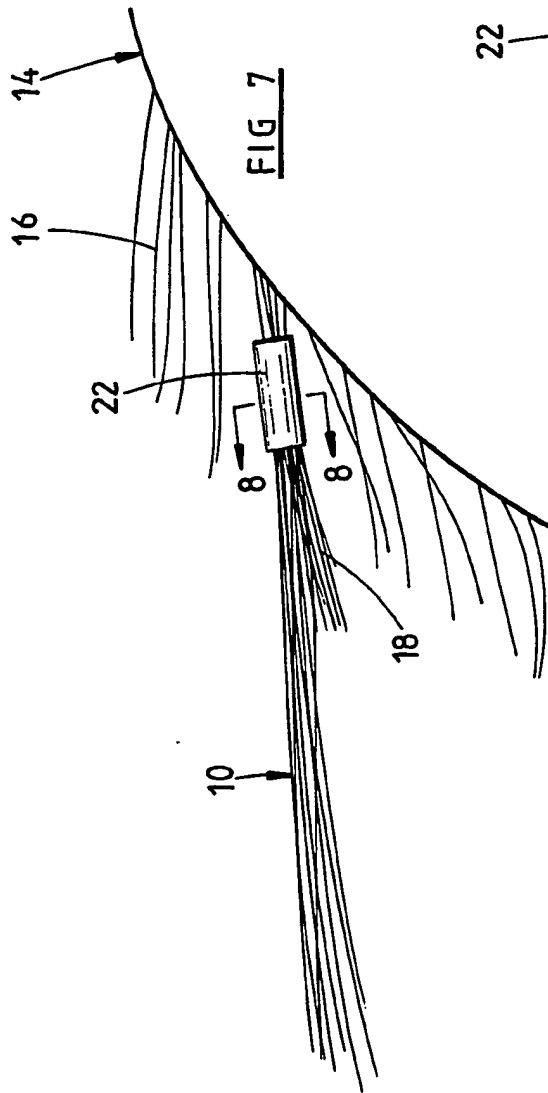
HAIR TREATMENT

This invention relates to hair treatment.

More particularly, the invention relates to a method of treating human hair so that it appears to be thicker and/or longer.

Various techniques have been proposed to thicken the appearance of human hair for cosmetic purposes. One known technique involves joining or wefting a plurality of locks of human hair then fixing the weft to the scalp of the subject. This technique has the drawback that it is relatively inflexible in that the locks are necessarily disposed in a line along the scalp of the subject. Further, the technique does not lend itself to the use of different colours or highlights at various locations. Another technique has been proposed to join strands of synthetic hair to natural hair by melting the ends of the strands of synthetic hair to hairs growing naturally on the head of the subject. Whilst this does offer some flexibility in replacement of the strands of synthetic hair, the use of synthetic hair is regarded as producing a low quality technique when compared to that which utilises human hair.

It is an object of the present invention to provide a new technique for thickening the appearance of hair of a subject which offers considerable flexibility in selecting the locations where the thickness of the hair is to be increased and also the possibility of placing locks of different colours or highlights in the hair of the subject.

According to the present invention there is provided a method of thickening and/or lengthening the appearance of the hair of a subject comprising the steps of:

(i)   forming a plurality of locks of human hair each lock having one end at which the hairs are joined together,

(ii)   selecting a plurality of spatially distributed sites on the scalp of the subject for fixing respective locks,

(iii)   at each site, selecting a group of hairs growing from the scalp of the subject, and

(iv)   connecting the joined end of one of said locks to said group of hairs adjacent to the scalp of the subject.

Preferably, the joined end of each lock is formed by inserting hairs into a tube.

Preferably further, said step of connecting the lock to a group of hairs is effected by passing the hairs in said group through a plastically deformable tube, introducing the joined end of the lock into the deformable tube and plastically deforming the tube adjacent to the scalp of the subject to thereby clamp the lock and group of hairs together.

Preferably the locks are formed with the other ends thereof tapered.

Preferably the locks are formed by folding a strand of human hairs back along itself so as to form a strand of double the initial thickness and placing the folded end of the strand into the tube to form said joined end.

Preferably, the tube of plastics material is heat shrunk so as to clamp the hairs therein.

The invention also includes a lock of human hair produced by the methods described above.

The invention will now be further described with reference to the accompanying drawings, in which:
Figure 1 shows a strand of human hairs;
Figure 2 shows the hairs folded in half;
Figure 3 shows the folded ends inserted in a plastic tube;
Figure 4 shows the tube heat shrunk to form the completed lock in accordance with the invention;

Figure 5 schematically illustrates a connecting tube adjacent to the scalp of the subject;

Figure 6 schematically illustrates the connecting tube having the lock and growing hairs therein;

Figure 7 shows the connecting tube deformed; and

Figure 8 is a cross-sectional view along the line 8-8.

Figure 1 diagrammatically illustrates a strand 2 of human hairs containing about 100 to 400 and preferably about 200 human hairs. The lengths of the hairs are chosen so that the ends 4 and 6 of the strand are somewhat tapered. The strand is preferably folded near its middle to form a folded end 6, as illustrated in Figure 2. The folded end 6 is then introduced into a plastic tube 8. The tube 8 is preferably formed from heat shrinkable material such as polyethylene so that when the tube is subjected to elevated temperatures, it shrinks so as to hold the folded end 6 of the hairs tightly within the tube, as shown in Figure 4. This results in a lock 10 in accordance with the invention. The lock 10 has a tapered end 12 by virtue of the fact that the ends 4 and 6 of the strand 2 were themselves tapered. The final size of the tube 8 is about 1mm in outside diameter and has a length of about 5mm. The length of the hair in the lock is preferably in the range 300mm to 600mm long. The locks 10 can be prefabricated and stored in different lengths and colours in readiness for use.

Figures 5 to 8 diagrammatically illustrate the preferred way of attaching the locks 10 to the scalp of a subject. The subject may wish to thicken the hair to disguise thinning in places or simply lengthen his or her hair. The treatment of the invention is considered to be particularly useful for treating women who wish to have longer hair but find it difficult to grow because of damaged or unhealthy hair.

First, with reference to Figure 5, there is shown the scalp 14 of a subject having natural hairs 16 growing therefrom. The operator selects a group 18 of natural hairs at a site 20 at which one of the locks 10 is to be connected. The hairs in the selected group 18 are then inserted through an aluminium tube 22 and the tube 22 is

moved so that it lies adjacent to the scalp 14 of the subject. The inner end of the tube 22 is as close as possible to the scalp and preferably less than 10mm therefrom. The number of hairs in the group 18 can be selected in accordance with the density of hairs growing at the site. It is envisaged that there would normally be from 30 to 60 hairs and preferably 40 to 50 hairs in the group 18. The hairs in the group 18 would normally lie within an area of less than about 1 sq.cm. The aluminium tube preferably has an internal diameter of about 1.5mm and an outer diameter of about 2mm. Its length is in the range 2mm to 10mm and preferably about the same length as the tube 8. For bigger diameter locks, the tube 22 would be longer to ensure a stronger connection to the hairs in the group 18.

The operator then selects a lock 10 for placement at the site 20. The operator selects the correct length and colour of the lock appropriate for the selected site 20. The tube 8 of the lock is then threaded through the tube 22 as illustrated in Figure 6.

The operator then crimps the aluminium tube 22 so that it is flattened and clamps the tube 8 and the selected group 18 of hairs therein, as diagrammatically illustrated in Figures 7 and 8. The operator can crimp the aluminium tube 22 using a pair of pliers or other instrument for flattening the tube 22 so that it remains plastically deformed.

The operator can use a similar technique for joining other locks 10 at selected sites 20. The sites themselves can be chosen by the operator in accordance with the desired amount of thickening or lengthening of the natural hair on the scalp 14 so as to achieve an optimum result. For instance, at places where the natural hair is relatively thin more of the locks 10 can be connected. It is envisaged that the sites 20 would be spaced from one another by a distance in the range 20mm to 40mm where substantial thickening of the hair of the subject is required.

The operator also has the option of selecting locks of different colours at different sites so as to give a highlighted or gradually varying coloured effect in the resultant hair of the subject.

After a period of about 4 to 8 weeks from treatment the natural hair 16 will normally have grown such that the aluminium tube 22 is now located at a distance of say 20mm to 25mm from the scalp 16, it is desirable that the subject returns to the operator to remove the locks.

In order to remove the locks, the operator simply squeezes the sides of the flattened tube 22 as illustrated by arrows 24 in Figure 8 so as to open up the deformed aluminium tube 22 and enable it and the tube 8 to be removed from the group 16 of hairs. The operator then uses the same technique described above to reapply new locks 10 in accordance with the invention. It would be possible to re-use the locks but it is preferred to use new locks for each application.

Many modifications will be apparent to those skilled in the art without departing from the spirit and scope of the invention. For instance, the use of the tubes 8 is simple and convenient but it is not the only way of holding the ends of the strand together. For instance glue or bonding agent could be used for this purpose. Further, the use of the aluminium tubes 22 is particularly suitable for use in connecting the locks 10 to the selected group 18 because connection and disconnection can be easily effected. However, other techniques such as bonding, sewing or knotting could be used.

CLAIMS

1.   A method of thickening and/or lengthening the appearance of the hair of a subject comprising the steps of:

(i)   forming a plurality of locks of human hair each lock having one end at which the hairs are joined together;

(ii)   selecting a plurality of spatially distributed sites on the scalp of the subject for fixing respective locks;

(iii) at each site, selecting a group of hairs growing from the scalp of the subject; and

(iv)   connecting the joined end of one of said locks to said group of hairs adjacent to the scalp of the subject.

2.   A method as claimed in claim 1, wherein the joined end of each lock is formed by inserting hairs into a tube.

3.   A method as claimed in claim 2, wherein said tube comprises plastics material which is heat shrunk so as to clamp the hairs therein.

4.   A method as claimed in claim 2 or 3, wherein the locks are formed by folding a strand of human hairs back along itself so as to form a strand of double the initial thickness and placing the folded end of the strand into the tube to form said joined end.

5.   A method as claimed in claim 2, 3 or 4, wherein said tube comprises polyethylene.

6.   A method as claimed in claim 2, 3, 4 or 5, wherein the tube has an outside diameter of about 1mm and a length of about 5mm.

7.   A method as claimed in any preceding claim, wherein the length of the lock is in the range 300 to 600mm.

8.   A method as claimed in any preceding claim, wherein the hairs of the locks are tapered at the other ends of the locks.

9.   A method as claimed in any preceding claim, wherein from 30 to 60 growing hairs are selected to form said group.

10.   A method as claimed in any preceding claim,

wherein said step of connecting the lock to a group of hairs is effected by passing the hairs in said group through a plastically deformable tube, introducing the joined end of the lock into the deformable tube and plastically deforming the tube adjacent to the scalp of the subject to thereby clamp the lock and group of hairs together.

11.   A method of thickening and/or lengthening the appearance of the hair of a subject substantially as herein described with reference to the accompanying drawings.

12.   A lock of hair for use in the method claimed in any preceding claim, said lock comprising a plurality of human hairs extending from a tube.

13.   A lock of hair as claimed in claim 12, substantially as herein described with reference to Figure 4 of the accompany drawings.

Patents Act 1977 Examiner's report to the Comptroller under Section 17 'he Search report)	Application number GB 9317802.8

Relevant Technical Fields (i) UK Cl (Ed.L) A4V (ii) Int Cl (Ed.5) A41G 3/00, 5/00	Search Examiner N A FRANKLIN
	Date of completion of Search 15 DECEMBER 1993
Databases (see below) (i) UK Patent Office collections of GB, EP, WO and US patent specifications. (ii) ONLINE DATABASE: WPI	Documents considered relevant following a search in respect of Claims :- 1-11

Categories of documents

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P: Document published on or after the declared priority date but before the filing date of the present application.

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&:   Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
X,P	GB 2260490 A (GOLD) 21 April 1993 Note Claim 1	1
X	EP 0438986 A1 (HAIR FASHION) Note Figure 2	1
X	US 4982748 (TRIMARCHI) Note Claim 1	1
X	US 4934387 (MEGNA) Note Claim 1	1

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